

General

Title

Diagnosis and management of asthma: percentage of patients with spirometry or peak flow at the last visit related to asthma.

Source(s)

Sveum R, Bergstrom J, Brottman G, Hanson M, Heiman M, Johns K, Malkiewicz J, Manney S, Moyer L, Myers C, Myers N, Oâ€™Brien M, Rethwill M, Schaefer K, Uden D. Diagnosis and management of asthma. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2012 Jul. 86 p. [81 references]

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of patients age five years and older diagnosed with asthma who had spirometry or peak flow measurement at the last visit related to asthma.

Rationale

The priority aim addressed by this measure is to increase the rate of patients five years and older who have accurate assessment of asthma severity and control through the use of objective measures of lung function and symptoms.

Asthma remains the number one chronic disease of childhood with 12.8 million school days missed. The toll of asthma includes 1.7 million emergency department visits, 10.6 million physician office visits, 444,000 hospitalizations and 3,613 deaths.

The United States has seen declining asthma death rates despite increased prevalence. Fewer patients who have asthma report limitation to activities. Twenty-three million Americans, one out of every 13 people, have this chronic inflammatory lung disease that if uncontrolled can lead to suffering with cough, wheezing and shortness of breath. Approximately 50% of asthma patients report having had an attack within one year, and they suffer a larger volume of missed school and work. Of all asthma patients, more than 13% suffer asthma attacks that require urgent medical care. The Centers for Disease Control and Prevention identified its priority to be patients improving management of asthma symptoms.

It is important to periodically assess pulmonary function. The main methods are spirometry or peak expiratory flow rate (PEFR). Spirometry is more precise and yields more information than PEFR. It is helpful to verify the accuracy of the peak flow meter. It is useful when certain physical limitations affect accuracy of PEFR (e.g., very young or elderly, neuromuscular or orthopedic problems). PEFR provides a simple, quantitative and reproductive measure of severity of airflow obstruction. The results are more reliable if the same type of meter, and preferably the patient's own, is used.

Evidence for Rationale

Centers for Disease Control and Prevention (CDC). Hepatitis C virus infection among adolescents and young adults: Massachusetts, 2002-2009. MMWR Morb Mortal Wkly Rep. 2011 May 6;60(17):537-41. [PubMed](#)

Enright PL, Lebowitz MD, Cockcroft DW. Physiologic measures: pulmonary function tests. Asthma outcome. Am J Respir Crit Care Med. 1994 Feb;149(2 Pt 2):S9-18; discussion S19-20. [81 references] [PubMed](#)

Miles JF, Bright P, Ayres JG, Cayton RM, Miller MR. The performance of Mini Wright peak flow meters after prolonged use. Respir Med. 1995 Oct;89(9):603-5. [PubMed](#)

National Asthma Control Initiative. Take action: stop asthma today! What you can do, NOW. NIH publication 10-7542. Bethesda (MD): National Institutes of Health (NIH); 2010 Sep.

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Primary Health Components

Asthma; spirometry; peak expiratory flow rate (PEFR); children

Denominator Description

Number of asthma patients seen for an asthma related visit (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Number of asthma patients who had spirometry or peak flow measurement at the last visit related to asthma

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

Additional Information Supporting Need for the Measure

Unspecified

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Clinical Practice or Public Health Sites

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Age greater than or equal to 5 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Living with Illness

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

The time frame pertaining to data collection is monthly for groups that want to track process changes in a shorter period. Otherwise, data collection can also be done quarterly.

Denominator Sampling Frame

Patients associated with provider

Denominator (Index) Event or Characteristic

Clinical Condition

Encounter

Patient/Individual (Consumer) Characteristic

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Number of asthma patients seen for an asthma related visit

Include last visit with a clinician that has documentation of one of these International Classification of Diseases, Ninth Revision (ICD-9) diagnosis codes: 493.00, 493.01, 493.10, 493.11, 493.90, 493.91.

Population Definition: Patients five years and older.

Data Collection: Identify patients with an asthma ICD-9 diagnosis at the last visit. If a patient had multiple visits during the target month/quarter, select the last visit where asthma was addressed.

Exclusions

Unspecified

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Number of asthma patients who had spirometry or peak flow measurement at the last visit related to asthma

Exclusions

Unspecified

Numerator Search Strategy

Encounter

Data Source

Administrative clinical data

Paper medical record

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Standard of Comparison

not defined yet

Identifying Information

Original Title

Percentage of patients with spirometry or peak flow at the last visit related to asthma.

Measure Collection Name

Diagnosis and Management of Asthma

Submitter

Institute for Clinical Systems Improvement - Nonprofit Organization

Developer

Institute for Clinical Systems Improvement - Nonprofit Organization

Funding Source(s)

The Institute for Clinical Systems Improvement's (ICSI's) work is funded by the annual dues of the member medical groups and five sponsoring health plans in Minnesota and Wisconsin.

Composition of the Group that Developed the Measure

Work Group Members: Richard Sveum, MD (*Work Group Leader*) (Park Nicollet Health Services) (Allergy); Ken Johns, MD (Allina Medical Clinic) (Pediatrics and Allergy); Sarah Manney, DO (Essentia Health)

(Pediatrics); James Bergstrom, MD (Fairview Health Services) (Internal Medicine and Pediatrics); Janet Malkiewicz, RN, AE-C (HealthPartners Medical Group and Regions Hospital) (Health Education); Lisbeth Ann Moyer, RPh (HealthPartners Medical Group and Regions Hospital) (Clinical Pharmacy, Medication Therapy Management); Michael Rethwill, MD (HealthPartners Medical Group and Regions Hospital) (Family Medicine); Gail Brottman, MD (Hennepin Faculty Associates) (Pediatrics); Marlis O'Brien, RRT, CPFT, AE-C (Mayo Clinic) (Respiratory Therapist/Asthma Educator); Mary Heiman, LSN, RN, MS (Minneapolis Public Schools) (School Nurse); Nicolette Myers, MD (Park Nicollet Health Services) (Pulmonology); Kathryn Schaefer, MD (South Lake Pediatrics) (Pediatrics); Donald Uden, PharmD, FCCP (University of Minnesota, School of Pharmacy) (Department of Pharmaceutical Care and Health Systems); Myounghee Hanson, BA (Institute for Clinical Systems Improvement) (Clinical Systems Improvement Facilitator); Cassie Myers (Institute for Clinical Systems Improvement) (Systems Improvement Coordinator)

Financial Disclosures/Other Potential Conflicts of Interest

James Bergstrom, MD, Work Group Member
Internal Medicine and Pediatrics, Fairview Health Services
National, Regional, Local Committee Affiliations: None
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Gail Brottman, MD, Work Group Member
Pediatric Medicine, Hennepin Faculty Associates
National, Regional, Local Committee Affiliations: Board member, American Lung Association — MN; Member, American Lung Association National Assembly
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Mary Heiman, LSN, RN, MS, Work Group Member
Minneapolis Public Schools
National, Regional, Local Committee Affiliations: Medica Public Programs steering group member on MN child/family public assistance programs; Board member, School Nurse Organization of MN; School Nurse Organization of MN annual conference reimbursement; Member, U of MN School of Nursing, Children with Special Health Care Needs advisory council
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Ken Johns, MD, Work Group Member
Pediatrician and Allergist, Allina
National, Regional, Local Committee Affiliations: None
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Janet Malkiewicz, RN, BSN, AE-C, Work Group Member
Respiratory Nurse Clinician, Health Education, HealthPartners Medical Group and Regions Hospital
National, Regional, Local Committee Affiliations: None
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Sarah Manney, DO, FAAP, Work Group Member
Pediatrician, Essentia Health
National, Regional, Local Committee Affiliations: None

Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Lisbeth Ann Moyer, RPh, Work Group Member
Clinical Pharmacist, Medication Therapy Management, HealthPartners Medical Group and Regions Hospital
National, Regional, Local Committee Affiliations: None
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Nicolette Myers, MD, Work Group Member
Pulmonologist, Park Nicollet
National, Regional, Local Committee Affiliations: None
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Marlis O'Brien, RRT, AE-C, CPFT, Work Group Member
Respiratory Therapist, Mayo Clinic
National, Regional, Local Committee Affiliations: None
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Michael Rethwill, MD, Work Group Member
Family Medicine, HealthPartners Medical Group and Regions Hospital
National, Regional, Local Committee Affiliations: None
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Kathryn Schaefer, MD, Work Group Member
Pediatrician, South Lake Pediatrics
National, Regional, Local Committee Affiliations: None
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Richard Sveum, MD, Work Group Leader
Allergist, Park Nicollet Health Services
National, Regional, Local Committee Affiliations: Board member, American Lung Association of the Upper Midwest
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: None

Donald Uden, PharmD, FCCP, Work Group Member
Department of Pharmaceutical Care and Health Systems, University of MN
National, Regional, Local Committee Affiliations: Board member, American Lung Association — MN Leadership Board
Guideline-Related Activities: None
Research Grants: None
Financial/Non-Financial Conflicts of Interest: Consultant, Point of Care Decision Support on Asthma guidelines software support; Educational presentation for American Lung Association on "Asthma Medications" given in January 2012

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2012 Jul

Measure Maintenance

Scientific documents are revised every 12 to 24 months as indicated by changes in clinical practice and literature.

Date of Next Anticipated Revision

The next scheduled revision will occur within 24 months.

Measure Status

This is the current release of the measure.

This measure updates a previous version: Institute for Clinical Systems Improvement (ICSI). Diagnosis and management of asthma. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2010 June. 63 p.

The measure developer reaffirmed the currency of this measure in January 2016.

Measure Availability

Source available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#)

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For more information, contact ICSI at 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; Phone: 952-814-7060; Fax: 952-858-9675; Web site: www.icsi.org ; E-mail: icsi.info@icsi.org.

NQMC Status

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Production

Source(s)

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